An Inaugural Dissertation on Phthisis Pulmonalis.

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Preface

In selecting the subject of phthisis pulmonalis for my Inaugural Dissertation, I am well aware of the difficulties I have incurred, and am conscious of my inability to do justice to a theme at once so complicated and important. I do not flatter myself that the following sheets will contain much new information, or that I shall add much to the facts already established: and as I here make my acknolegments to the authors from whom my information has been derived, I will indulge the hope that particular references may be dispensed with.

Knowing the liberality of sentiment which so peculiarly marks the character of the Gentlemen to whome this Essay is particularly submitted. I feel a assurance, that the first production of a juvenile mind, although wide of perfection, cannot fail to meet with a flattering indulgence.

Inaugural Dissertation

Long and gloomy is the catalogue of physical sufferings to which man, placed at an immeasurable distance above other animals, by the characteristic excellences of material organization, and by the exclusive attributes of reason and intelligence, stands incessantly exposed: heavy the tribute which, at the shrine of eternal and unerring justice, he is called upon to pay for his proud preeminence in the scale of created being. Civilization too with all her charms and blandishments introduces among her favoured children, a train of evils and diseases, which are almost unknown to the more wild and rugged walks of savage life. Amid the sufferings and the diseases which this catalogue exhibits to our view Phthisis Pulmonalis stands inscribed in distinguished characters of terror and devastation. With the vulgar every malady, of which extreme emaciation constitutes a striking feature, however its origin and offence, is designated by one familiar and indiscriminate term. And medical men, we fear, too frequently cloak beneath that chilling and portentious name "consumption" their own carelessness or inefficiency; and thus prematurely quench every hope still fondly cherished in the bosom of friendship and

of affection. Not a day it is to be feared passes, but many cases of phthisis, capable of great and even permanent relief, by the well directed resource of science, are abandoned as hopeless; some of which, terminating successfully from the unassisted energies of nature, serve only to deck, ~~the~~ with unmerited honour, the nostrum of some vile empiric, and to degrade the regular physician in the eyes of the public.

By phthisis pulmonalis or pulmonary consumption is to be understood that affection in which a general wasting or consumption of the body arises from a disease of the lungs, attended with expectoration of purulent matter, and a hectic fever.

The incipient symptoms of phthisis usually vary with the cause of the disease, but when it arises from tubercles, it is mostly marked thus: It begins with a short dry cough, that at length becomes habitual, but from which nothing is spit up for some time except a frothy mucus that seems to proceed from the fauces. The breathing is ~~at the~~ same time somewhat impeded, and upon the least bodily motion is much hurried, a sence of straitness, with oppression at the chest is experienced, the body becomes gradually emaciated, and great languor with indolence, dejection of spirits, and loss of appetite prevail.

About this period the catamenia in women cease to flow, and from this circumstance they are often led to entertain the most sanguine hopes of a speedy cure, as it is from the suppression of this evacuation that they imagine all their complaints arise. In this state the patient frequently continues a considerable length of time, during which he is however more readily affected than usual by slight colds, and upon one or other of these occasions the cough becomes more troublesome and severe, particularly by nights and is at length attended with an expectoration, which, towards morning is more free and copious.

By degrees the matter which is expectorated, becomes more acrid and opaque, and now assumes a greenish colour and purulent appearance, being on many occasions streaked with blood.

In some cases a more severe degree of hoemoptysis attends, and the patient spits up a considerable quantity of florid frothy blood. A pain in some part of the thorax, most commonly immediately under the sternum is sometimes the first indication of incipient consumption, the sensation is most troublesome upon a full inspiration, or upon the patients lying down sometimes it is confined to one side, rendering a recumbent

position disagreeable and tiresome. At the commencement of the disease the pulse is often natural, or perhaps is soft, small and a little quicker than natural, but when the symptoms which have been enumerated have subsisted for any length of time it then becomes full, hard, and frequent. At the same time the face flushes, particularly after eating the palms of the hands and soles of the feet are affected with burning heat, the respiration is difficult and laborious, evening exacerbations become obvious, and by degrees the fever assumes the hectic form. Hectic fever, appears according to Doctor Cullen in the form of a remittent, with two exacerbations occurring in the latter part of the day, the second gradually increasing till after midnight, when a remission takes place, and becomes more evident as the morning advances, the exacerbations are frequently attended with cold shivering and a morbid sensibility to any coolness of the air: that which takes place in the evening is always the most considerable. From the first appearance of the hectic symptoms, the urine is high coloured, and deposits a copious brownish red sediment. The appetite, however, is not greatly impaired, the tongue appears clean, the mouth is usually moist,

and the thirst is inconsiderable. As the disease advances the fauces put on rather an inflamed appearance, and are beset with aphthæ, and the red vessels of the tunica adnata become of a pearly white. During the exacerbations, a florid circumscribed redness appears on each cheek, but at other times the face is pale, and the countenance somewhat dejected.

At the commencement of hectic fever the belly is usually costive, but in the more advanced stages of it, a diarrhœa often comes on, and this continues to recur frequently during the remainder of the disease: colliquative sweats likewise break out, and these alternate with each other and induce extreme debility. In the last stage of this disease the emaciation is so great that the patient has the appearance of a walking skeleton, his countenance is altered, his cheek bones are prominent, his eyes look hollow and languid, his hair falls off, his nails are of a livid colour, and much incurvated, and his feet are affected with œdematous swellings. Delirium seldom attends this disease; the senses and judgment commonly remain unimpaired, and the most sanguine hopes of recovery leave the patient, but with life: Towards the close of the disease he becomes restless and discontented, the mind and memory seeming some=

-times to share in the general debility of the body, his voice faulters, a distressing hiccough and slight convulsions come on; his peevish complaints subside, and he sinks to death without a consciousness of pain or anxiety.

I have thus endeavoured to give a description of Pulmonary Consumption as it most commonly appears, but the shapes it assumes are so various, and its symptoms often so complicated, that the limits of an inaugural essay do not permit me to trace it through its different forms.

It may not however be improper to observe here that it is not unfrequently complicated with other diseases, the most common of which are scrophula, rheumatism, and gout; it has likewise been observed to give place to mania, pains in different parts of the body, and cutaneous eruptions; its progress appears to be arrested in the most remarkable degree by the state of the system which is induced by pregnancy, from this circumstance Doctor Beddoes has founded his very ingenious theory of the disease, ascribing it to an undue Oxygenation of the blood, gestation in his opinion by diminishing the capacity of the thorax, and thereby lessening the proportion of

Oxygen decomposed in the lungs, must necessarily tend to suspend the symptoms of the disease till delivery, after which period we find the disorder progressing as before gestation.

Phthisis Pulmonalis generally attacks persons between the fifteenth and thirty fifth years of life, but may occasionally happen before or after that period. Those who have grown fast, have clear skins and delicate complexions are the most liable to pulmonary complaints. A narrowness of the chest, and an elevation of the sternum, are evidences of a predisposing conformation. It has likewise been a general observation, that a whiteness or transparency of the teeth, is a characteristic of Phthisical diathesis. Doctor Simmons observes that the greater number of those who are carried off by this disease, will be found never to have had a carious tooth. I do not take upon me to determine, how far the doctor's assertion may be consistent with the observation of others, but believe, that in this country at least, instances to the contrary may be met with daily.

Women are more frequently affected with pulmonary consumption than men—they partake but in a small degree of those exercises so necessary to the health of the body. Their delicate frames render them extremely susceptible of the action of exciting causes; and their mode of dress, by compressing the thorax, and obstructing a free respiration, necessarily

predispose them to Pathetical complaints; hence we daily see numbers of the fairest ornaments of human nature hurried to a premature grave.

One of the first things which strike us in those nations, among whom, consumption is most prevalent, is the deficiency of their clothing. But in our mode of living, their clothing is not the only circumstance which disposes to consumption; some classes of our country men appear to be almost wholly exempt from it, while others suffer particularly. In confirmation of this idea I am happy in being able to bring forward the testimony of Doctor Rush, who observed, when speaking of this dis=ease, that it is scarcely known among the inhabitants of our frontier settlments. It is generally believed that the Aborigines of our country were nearly exempted from this disease, however this may have been, it is certain, that since the introduction of European intemperance amongst them, consumption has not been unfrequent, the active employ=ments of the Indians are very limited and for the most part the calls of hunger only can rouse them from the state of inactivity attendant on the savage life; from these circumstances, I think it not to be wondered at, if Phthisis pulmonalis should be found to be one of their most frequent diseases. If any situation in life can entirely preclude from pulmona=ry consumption, it is most probably that state of civilized society, in

which the industrious and frugal peasant is barely supported by an unremitted industry – a state equally removed from the temptations of imported luxury, and the allurements of savage indolence.

It has been an idea, held out by some of the first medical characters that consumption sometimes depends on specific contagion, and many instances have been adduced where one person has communicated the disease to another; but this theory is at best hypothetical, and even wants the character of probability; I am of opinion that such cases may be accounted for with more propriety, on less exceptionable grounds; It cannot be denied that an hereditary predisposition often exists, by which more than one person in a family may be subjected to Phthisis; add to this the state of debility induced by a constant attention to a patient languishing under this disease, and we will not be surprised that some instances of the disorder should be attributed to contagion.

It has been before observed that an expectoration of purulent matter is one of the characteristic symptoms of pulmonary consumption; the mucus which is thrown up from the lungs in catarrh frequently resembles this in a considerable degree, and as it is of the great importance to be able to distinguish one from the other, I will subjoin the

methods commonly used for this purpose.

1st, let the expectorated matter be dissolved in sulphuric acid and ~~in~~ caustic lixivium and add pure water to both solutions. If there is a fair precipitate in each, it is a certain sign of the presence of pus; but if there is not a precipitation in either, it is certainly mucus.

2nd, Nitrous acid dissolves both pus and mucus, water added to the solution of pus produces a precipitate, and the fluid above becomes clear and green, while water and the solution of mucus form a turbid coloured fluid.

3rd, Coagulated lymph is neither soluble in concentrated nor dilute sulphuric acid.

4th, Corrosive sublimate coagulates mucus but does not coagulate pus.

Lastly a purulent expectoration may be known from a mucus discharge, by the former being attended with a hectic fever.

I shall in the next place proceed to state the causes on which pulmonary consumption depends; these are various. Whatever tends to impair the strength of the system, thereby inducing a state of debility in the body in general, or in the lungs in particular, so as to render them more susceptible of the action of stimuli, may be justly enumerated among the remote causes of this disease.

Haemoptysis, Pneumonia, Catarrh, and Scrophula, when they induce a state of chronic debility, are frequently among the causes of phthisis. Medical writers have likewise described it as an effect of local in==juries, particularly wounds of the lungs; it is said to arise also from the dust discharged in certain manufactories. In my opinion the last mentioned circumstances can operate as remote causes much less fre==quently than has been generally supposed. Wounds in the substance of the lungs if they occur in a healthy state of the system, I believe are found to heal as certainly and in as short a period, as injuries in other parts of the body. Mr. John Hunter, when speaking of consumption from this cause, observed that he never saw it produced by a wound in the lungs. Doctor Rush in his second volume of medical enquiries and obser==vations, gives an instance which must set aside every doubt on the subject. Out of twenty-four soldiers who had been admitted in the British Hospitals during the campaign of 1776. with wounds in the lungs, twenty-three of them recovered perfectly.

Heat suddenly ~~[illegible]~~ succeeding cold, violent exercise, and stimul==ating passions are frequently remote causes of consumption, these may either bring on a state of debility, or, by inducing a preternatural de==termination to the lungs, may excite haemorrhage and thereby create

a weak part. To these causes may be added, a sedentary life, and the suppression of any customary evacuation.

It may not perhaps appear foreign to our subject, to enquire, under what circumstances Hoemoptysis, Pneumonia and Catarrh, are followed by consumption of the lungs? Whenever Hoemoptysis occurs, as a symptom of a general disease which has occasioned a considerable degree of debility, a phthisis pulmonalis may be dreaded as its consequence; the same may be expected, when from the magnitude of the injury, and the irritation given to the Bronchial vessels, a cough is induced which if long continued, must necessarily bring on a state of general or pulmonary debility.

In this situation of system, Hoemoptysis is most commonly followed by an ulcer in the lungs, the ulceration is sometimes attended with little of hectic; and frequently admits of being soon healed.

Even when hoemoptysis and ulceration have happened to be repeated, there are instances of persons recovering entirely after several such repetitions.

Pneumonia has been seldom the cause of pulmonary consumption except in those cases in which the cure has been left in the hands of nature and sufficient evacuation has not been resorted to. Nature endeavouring to relieve herself of the violent symptoms of the former

disease, produces a vomica or an effusion on the lungs thereby changing an acute into a chronic affection. From this circumstance, Dr Rush has called Pneumonia an acute consumption, and consumption a chronic Pneumonia. As the debility attending these cases is generally transient, and differs widely from that habitual predisposition already mentioned; we find fewer instances of mortality in Phthisis Pulmonalis from this than from any other cause. A nourishing diet, fresh air, and a return to customary exercise, very frequently restores the patient to perfect health.

We frequently meet with cases of catarrh, which have continued for many years without producing phthisis pulmonalis, more especially in persons who pursue active and invigorating occupation, it is therefore probable that it seldom operates as a cause of Pulmonary consumption, and in those cases in which it does it is only joined with scrophulous, or consumptive diathesis.

The morbid appearance most frequently to be met with on the dissections of those who die of phthisis is the existence of tubercles in the cellular substance of the lungs. These are, small tumours, which have the appearance of indurated glands, are of different sizes, and are often found in clusters. Their firmness is usually in proportion to their size, and when laid open in this state they are of a white colour, and of a consistence nearly approaching to cartilage. Although indolent at first, they at length

become inflamed, and are at last changed into little abscesses, or vomica which breaking and pouring their contents into the bronchia, give rise to purulent expectoration, and they lay the foundation of phthisis. Such tubercles, or vomica, are most usually situated at the upper and back part of the lungs, but in some instances, they occupy the outer part, and then adhesions to the pleura are often formed.

When the disease is partial, only about one fourth of the upper and posterior part of the lungs is usually found diseased, but in some cases, life has been protracted till not one twentieth part of them appeared, on dissection, fit for performing their function. I apprehend that a great cause of our insufficiency in the cure of phthisis may depend on the very gradual manner in which its approaches are made, they are for the most, so slow that the patient, seldom complains till the disease is incurable. Indeed he is so invariably possessed with an idea of the favourable termination of his disorder that throughout its whole course he is willing to indulge the most flattering expectations and too often neglects the only possible means of cure.

Experience having taught, that it is only in the early stage of phthisis that remedies are likely to be employed with success, we ought by all means to pay the greatest attention to the first appearance of the symptoms. When a person of a phthisical habit, or born of parents, who have

head the same disposition, is about the age of twenty, or sooner, attacked in the spring of the year, or summer, with the symptoms which have been enumerated in the first stage of the disease, and this even in the very slightest degree, we have just grounds to apprehend that tubercles have either formed, or are about to form in the lungs: in such a case we are to exertour utmost endeavours to prevent their formation, and to procure their resolution. To effect these purposes, we must have resource to a strict pursuance of the anti=phlogistic plan, such as bleeding, keeping the body open with gentle laxatives, and the use of a spare regimen. The propriety of bloodletting, has however, of late been much disputed, and it has indeed fallen a good deal into disrepute. That bloodletting, and the rest of the antiphlogistic plan may formerly have been carried much too far in many cases, I readily admit, but when there is a full hard pulse, and difficult respiration, the patient complains of pain in his breast, or side, has hot restless nights, and a cough, there can be no doubt but that bleeding may be of infinite service, provided the quan=tity taken away bears a just proportion to his strength and habit, and to the severity of the symptoms; but having resource to it under the stage of ulceration, where the expectoration has become purulent, and where great debility prevails with nights sweats, and repeating the opera=tion frequently, even in small quantities at a time must evidently prove

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highly injurious. At an early period, we have in view to prevent a resolution of the inflamed tubercles; but in confirmed phthisis this hope no longer exists. A variety of remedies have been recommended to be made use of in phthisis, and are to be found in the works of every author on this subject, to mention them all would be of little use to the reader and would far exceed the limits of this essay, besides, many of them are inert, useless and improper. I shall therefore leave it to the practitioner to adopt a medical line of practice which constitutional exigencies demand and his judgment dictates.

From the analogy of scrophula, to tubercular consumption promises much. It will be generally admitted I believe, that external glandular swellings and suppurations, often tend to prevent internal disease. We see in the same family, some fall a sacrifice to phthisis, while others labouring under scrophulous swellings escape it. I have seen a person apparently in the last stage of phthisis, saved by the glands of the neck suddenly swelling and suppurating.

In confirmation of this idea I am happy in being able to bring forward the testimony of Doctor Parrish, one case that fell under his care I will state in the Doctors words.

"Hetty Hillin, aged about thirty years, a woman of colour, came under my notice as a dispensary patient in the early part of the fourth

month (April) 1869. She had been afflicted with a cough for about twelve months and was often unwell during that period, but although in an infirm state she continued in a family at service until the first of the third month (March) when her complaints increased to such a degree that she was compelled to leave her place.

At the time I visited her, she was labouring under cough, frequent chills, and fever, and I believe her disease to be phthisis pulmonalis in an incipient state. The first time I saw her she called my attention to several large scrophulous tumors situated on the thorax, which gave her a great deal of pain, and for which she was desirous of obtaining relief. As my attention had for a considerable time been particularly directed to this subject, I viewed her case as uncommonly interesting and determined on giving a trial to the efficacy of the external disease in removing the internal. Emollient applications were ordered to the tumefied parts, while palliative remedies were prescribed for the cough.

Suppuration took place, and the abscesses were opened. A copious discharge was established, and happily for the patient there was an evident decline of the pulmonary complaint. I endeavoured to impress her with the absolute necessity of keeping the abscesses open, and she appeared convinced of the correctness of the practice.

Her recovery was not rapid but has proved certain. After the pulmonary symptoms declined, she was several times affected with diarrhoea, and frequently had chills and fever, for which, bark was occasionally employed. The discharge from the abscesses continued until last fall (1811) when her health appearing completely restablished, she permitted the ulcers to heal. I visited her the 30 of last month (June 1812) and found her in fine health. She informed me that last spring she was indisposed and one of her abscesses opened a fresh, and is now running, it is situated on the left side of the thorax, near the axilla, when she is the least unwell, the discharge from it is always increased.

I believe instances may be found on medical record of similar recoveries from phthisis pulmonalis.

Now I am induced to conclude that several important practical inferences may be drawn from these facts. In the first place they point out the danger of dislodging external scrophula, and more especially at critical periods of life, and I can conceive of no situation wherein it should be more carefully observed than in a young and delicate female just about the establishment of the catamenia, and who inherit a predisposition to phthisis pulmonalis. Would it not be safer, says the Doctor, under such circumstances, to bear the disease with patience rather than incur the risk of its falling on

vital parts? Reasoning from this case would it be too hypothetical so far to imitate nature in our practice, as to endeavour, in the very commence=ment of this formidable disease to produce tumefaction and suppuration in the glands about the neck, and on the thorax near the axilla, were, in the former especially, scrophula is generally seated? In some diseases, gout for ex=ample, do we not often observe a metastasis? and when it changes from an exter=nal, to an internal part, it is productive of danger, hence this part of prac=tice is so well understood, that physicians in general refrain from the use of such means as are capable of dislodging the disease from parts which are not esteemed vital. When such metastasis has occured, are not sinapisms directed to the extremities, in order if possible to excite the disease therein? or even if a vital part be primarily affected, is not the same practice; to the extremities adopted? From observation I am induced to believe that the same thing may occur in phthisis only in a more gradual way.

To answer this end, blisters, issues and cupping have been much employed; Doctor Caldwell relates a case, that was cured by dry cupping on the thorax. Issues and blisters, says he, skilfully managed, are important remedies in the treatment of consumption, whether the object be prevention or cure. To be really useful, their action should be long continued; for a chronic remedy is always necessary in a chronic disease.

Climate has been thought to have a great influence on this disease and for those, whose circumstances and situation in life will admit of it, the most effectual mode to escape the influence of a bad climate, is permanently to change it for a better one. To remove from the humid, bleak, and changeable atmos=phere of northern and middle latitudes, to the more temperate, dry, and steady climates of the south.

But there are on the contrary many individuals inclined to consumption, who from necessity, cannot effect an entire change of residence.

For such subjects, a proper kind of clothing constitutes the only probable safeguard from disease. This clothing should consist of an entire covering of soft cotton, flannel, or fleecy hosiery, worn constantly next to the skin.

By means of the warmest kind of woollen stockings, the feet in par=ticular should be faithfully guarded from cold and moisture. The hands also ought to be well protected, by gloves lined with fur or flannel.

Having thus delivered my observations on Phthisis Pulmonalis, I shall now close this essay, but to do this without an acknowledgment to the several medical professors of this university, would be a breach of that duty which my feelings claim. To you gentlemen, at least this small tribute of my esteem is due. Permit me then to present you with the sincere acknowlegements of a pupil, for the many opportunities of improvement

which your truly valuable lectures have afforded him. That you may long continue to exercise the duties attached to your respective departments, with the same reputation that has heretofore characterized your labours, is my sincere wish.